

A2
cont.

directing a coherent incident radiation beam at a first optical component;
transmitting the coherent incident radiation beam through the first optical component forming a transmitted beam, to a second optical component having a hologram with variable diffraction efficiency recorded therein; and
diffracting the transmitted beam via the hologram forming a diffracted radiation beam, wherein the coherent incident radiation beam and the diffracted beam interfere within the first optical component to form a replica of the hologram therein.

SUB
B3

22. A method for duplicating a hologram comprising:

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directing a coherent radiation beam at a first optical component having a hologram with variable diffraction efficiency recorded therein;
diffracting a first portion of the coherent radiation beam via the hologram forming a diffracted radiation beam;
transmitting a second portion of the coherent radiation beam through the first optical component forming a transmitted beam; and
interfering the diffracted radiation beam with the transmitted radiation beam within a second optical component to form a replica of the hologram therein.

SUB
BA

32. A method for contact recording at least one hologram comprising:

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arranging at least a first master hologram having variable diffraction efficiency and at least a first holographic blank in optical contact to form a master/blank assembly;
exposing the master/blank assembly to a pre-recording beam; and

A4
CONT

exposing the master/blank assembly to a recording beam, wherein the master/blank assembly remains optically contacted throughout each exposure.

SUB
B1

46. A method for contact recording at least one hologram comprising:

arranging at least a first master hologram having variable diffraction efficiency

and at least first holographic blank in optical contact to form a master/blank assembly;

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exposing the master/blank assembly to a recording beam; and

exposing the master/blank assembly to a post-recording beam, wherein the master/blank assembly remains optically contacted throughout each exposure.